

Docket No.: 38188-382

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Alan K. Gorenstein

Serial No.: 09/766,636

Filed: January 23, 2001

For: SYSTEM AND METHOD FOR COMPOSITE CUSTOMER SEGMENTATION

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Group Art Unit: Unassigned

Examiner: Unassigned

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**RESUBMISSION OF PETITION TO MAKE SPECIAL UNDER 37 CFR § 1.102(d)**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

In response to the August 8, 2001 denial of a Petition to Make Special submitted April 3, 2001, Applicant hereby re-petitions to make special the above-identified application in accordance with 37 CFR § 1.102(d). Pursuant to MPEP § 708.02(VIII), Applicant complies with each of the following items:

**A. FEE**

Applicant believes there is no fee incurred with this filing and that the previously paid petition fees should apply to this resubmission. However, if the fee submitted with the original petition does not carry-over to this re-petition, please charge Deposit Account 500417 the amount of \$130.00 as set forth in 37 CFR § 1.17(i) to cover the fee for the present Petition to Make Special.

**B. SINGLE INVENTION**

The relevant section of MPEP 708.02(B) states that the Applicant must either

- (a) present all claims directed to a single invention, **OR**
- (b) will make an election without traverse if the Office determines that all claims are not obviously directed to a single invention.

Applicant urges, contrary to the Office's assertions regarding the original petition, that the petition satisfied this requirement by stating:

"If the Office determines that all the claims presented are not obviously directed to a single invention, Applicants will make an election without traverse and hereby invites the Examiner to telephone the undersigned Applicants' representative for a telephonic election."

If the Office disagrees with Applicant's assertion that the above language satisfies the requirements, then Applicant affirmatively asserts that the new application presents all claims directed to a single invention.

**C. PRE-EXAMINATION SEARCH**

Applicants submit that a pre-examination search has been made. The field of search covers:

a) online keyword searching of non-patent literature databases including Business & Industry, ABI/INFORM, Gale Group F&S Index, World Reporter, Gale Group Trade and Industry, PROMT(R) (1972-200), Insurance Periodicals, Finance & Banking Newsletter, Banking Information Source, Financial Times Abstracts, Wall Street Journal Abstracts, Business Week, CMP Computer Fulltext, Computer News Fulltext, Internet and Personal Computer Abstracts, SoftBase, and a variety of other resources; and

b) online and manual searching of Class 705, subclasses 10 and 14 and Class 707, subclass 2.

**D. COPY OF REFERENCES**

A copy of the references were previously submitted with the initial filing on April 3, 2001, however, the following specific references are deemed, for purpose of this Petition, most closely related to the subject matter encompassed by the claims:

1. Barnoff et al., "Industry Segmentation and Predictor Motifs for Solvency Analysis of the Life/Health Insurance Industry", *Journal of Risk and Insurance*, v. 66 n. 1, pp. 99-123, Mar. 1999.

2. Ezop, "Database Marketing Research", *Marketing Research: A Magazine of Management & Applications*, v. 6, n. 4, pp. 34-41, Fall 1994.

3. Riquier et al., "Probabilistic Segmentation Modeling", *Journal of Market Research Society*, v. 39 n. 4, pp.57-73.

4. Kopp et al., "A Competitive Structure and Segmentation Analysis of the Chicago Fashion Market", *Journal of Retailing*, V. 65 n. 4, pp. 496-515, Winter 1989.

5. Li, "Preventing Model Muddle (Use of Response, Risk, and Combination Models)", *Direct Marketing*, v. 52 n. 4, pp. 20-22, August 1989.

6. English Abstract of JP 6-12456, "Customer Management System Using Segment Record History

7. U.S. Patent No. 5,956,693

8. U.S. Patent No. 6,061,658

**E. COMMENTS ABOUT THE DENIAL OF THE ORIGINAL PETITION**

In describing patentability, with the particularity required by 37 CFR 1.11(b) and (c), it is sufficient that Applicant identify only one aspect of each independent claim that is not disclosed by the closest art. Neither the regulations nor statutes require Applicant to identify every novel aspect of each of the independent claims.

Each independent claim (claims 1, 5, 16 and 18) explicitly requires the running of more than one segmentation strategy (*i.e.*, generating more than one explanation of variance) and determining a composite score from these different strategies. Thus, by noting that the closest art either:

- i) only uses one segmentation strategy (*i.e.*, explanation of variance), or
- ii) does not use a *composite* score of multiple segmentation strategies,

Applicant has sufficiently discussed how the *claimed* subject matter is patentable over the closest art, as required for a proper Petition.

Contrary to the assertion of the Office, even though the application has a plurality of independent claims of different scope, no explicit discussion of how this varying scope impacts patentability is required by the statutes or regulations for a proper Petition. To satisfy Applicant's burden to "clearly point out the patentable novelty ... in view ... of the references", all that is required is that at least one limitation of each independent claim must be shown as undisclosed by the closest art; a burden which Applicant vigorously urges has been clearly met.

Applicant has modified the detailed discussion in a manner which is believed to more clearly explain the distinctions between the references and the claims.

## **F. DETAILED DISCUSSION**

Applicant submits the following detailed discussion of the references deemed most closely related to the subject matter encompassed by the claims, pointing out, with the particularity required by 37 CFR 1.11(b) and (c), how the claimed subject matter is patentable over the references.

The present invention relates to a method and system for segmenting customer populations. In particular, a number of strategies for explaining variance among customers can be used to segment populations. These different segmentation strategies can include different measures of variance for the same target or multiple targets. The scores from the different segmentation strategies (measures of variance) are then combined to form a composite score with which the population can be segmented.

**1. Barnhoff et al., "Industry Segmentation and Predictor Motifs for Solvency Analysis of the Life/Health Insurance Industry", *Journal of Risk and Insurance*, v. 66 n. 1, pp. 99-123, Mar. 1999.**

The article by Barnhoff et al. describes a method for customer scoring that uses logistical regression to determine the robustness of a variable's value. However, each specific sub-variable can appear in only one actual variable. Another logistical regression is then conducted to create a score.

Unlike the method described in the article which relies solely on logistical regression as the explanation of variance, the present invention claims scoring multiple post-model targets using more than one explanation of variance (*i.e.*, running multiple segmentation strategies) without placing any limitations on the specific variables that are allowed to repeat throughout the multiple explanations of variance. Furthermore, according to the present claims, a composite of

these scores from the different segmentation strategies is then generated, a feature not disclosed in the article.

**2. Ezop, "Database Marketing Research", *Marketing Research: A Magazine of Management & Applications*, v. 6, n. 4, pp. 34-41, Fall 1994.**

This article describes the use of customer database records in combination with survey research to improve the effectiveness of marketing efforts.

The article by Ezop, however, does not suggest developing multiple segmentation strategies (i.e., explanations of variance) and their subsequent fusion into a composite segmentation score, as recited in the claims of the present invention.

**3. Riquier et al., "Probabilistic Segmentation Modeling", *Journal of Market Research Society*, v. 39 n. 4, pp.57-73.**

Riquier et al. describe a method for probabilistic segmentation modeling. While the authors discuss the use of a particular predictor variable to be used in segmentation, the method of the article uses only a single explanation of variance.

Unlike the presently claimed invention, the article does not describe or suggest multiple, different segmentation strategies (i.e., explanations of variance) being used to generate a plurality of scores that are then fused into a composite score.

**4. Kopp et al., "A Competitive Structure and Segmentation Analysis of the Chicago Fashion Market", *Journal of Retailing*, V. 65 n. 4, pp. 496-515, Winter 1989.**

This article describes a method for segmenting female apparel shoppers based on different groupings of competitive stores instead of an individual retailer.

The described model discusses using more variables within a single segmentation method. However, unlike the claimed invention, the article does not disclose or suggest the use of multiple segmentation strategies (i.e., explanations of variance) and their subsequent fusion into a composite score.

**5. Li, "Preventing Model Muddle (Use of Response, Risk, and Combination Models)", *Direct Marketing*, v. 52 n. 4, pp. 20-22, August 1989.**

Li compares and contrasts risk models and response models used by marketers to predict consumer behavior. A mixed model is described which is similar to the use of spend/linear models following response/logistic models in order to minimize direct-mail quantities.

However, unlike the presently claimed invention, the article does not disclose or suggest a fusion of scores from multiple, different segmentation strategies (i.e., explanations of variance) into a composite score that surpasses each of the stand-alone explanations of variance.

**6. English Abstract of JP 6-12456, "Customer Management System Using Segment Record History"**

The English abstract of the Japanese patent appears to describe a computerized customer management system for segmenting customer populations. The described computerized method differs from the presently claimed invention in that the abstract does not describe using multiple segmentation strategies (i.e., explanations of variance) nor creating a composite segmentation score based on the multiple segmentation strategies.

**7. U.S. Patent No. 5,956,693**

Geerlings describes allowing for a single explanation of variance when determining the segmentation of potential customers. This explanation of variance is described as business-rule

set by merchants, a regression method that uses more than one variable to predict a specific event, or neural nets. Geerlings holds, as unique, that the variables are dynamic such that as customers exhibit new behaviors their resulting score is updated.

In contrast to Geerlings, the present claims recite taking multiple explanations of variance (i.e., segmentation strategies) which, for example, can include business rules, neural nets, and multiple regressions and then fusing their results into a composite model or score.

#### **8. U.S. Patent No. 6,061,658**

Chou et al. describe the use of a single explanation of variance when determining the segmentation of potential target customers. This explanation of variance is described as a creation of segments using a "Tree Induction" algorithm (e.g., CHAID or CHART analyses). Once segmentation has occurred, each segment is scored based on the calculations of a single ratio-based statistical score that reflects a single specific historical observation (e.g., market penetration rate). It is conventionally known that once segmentation has occurred, many observations can be made for each of the segments.

The present claims distinguish over Chou et al. by reciting the taking multiple segmentation strategies (i.e., explanations of variance) which, for example, can include, CHART, CHAID, and other tree induction algorithms and fusing their results into a composite model or score.

#### **E. CONCLUSION**

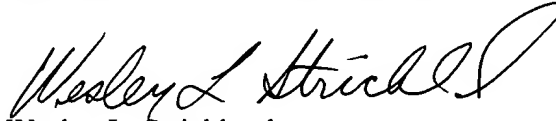
In view of the above, it is urged that the petition to make special is in proper form, and an indication of grant is respectfully solicited.



To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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